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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/919,024	07/31/2001	Harunori Hirao	4296-144	3715

7590

10/05/2006

MATHEWS, COLLINS, SHEPHERD & GOULD, P.A.  
SUITE 306  
100 THANET CIRCLE  
PRINCETON, NJ 08540

EXAMINER

OH, TAYLOR V

ART UNIT PAPER NUMBER

1625

DATE MAILED: 10/05/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Advisory Action  
Before the Filing of an Appeal Brief**

Application No.

09/919,024

Applicant(s)

HIRAO ET AL.

Examiner

Taylor Victor Oh

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**--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

THE REPLY FILED 18 September 2006 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

1. ☒ The reply was filed after a final rejection, but prior to or on the same day as filing a Notice of Appeal. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114. The reply must be filed within one of the following time periods:

- a) ☒ The period for reply expires 3 months from the mailing date of the final rejection.  
b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.

Examiner Note: If box 1 is checked, check either box (a) or (b). ONLY CHECK BOX (b) WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**NOTICE OF APPEAL**

2. ☐ The Notice of Appeal was filed on \_\_\_\_\_. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(a).

**AMENDMENTS**

3. ☒ The proposed amendment(s) filed after a final rejection, but prior to the date of filing a brief, will not be entered because  
(a) ☒ They raise new issues that would require further consideration and/or search (see NOTE below);  
(b) ☐ They raise the issue of new matter (see NOTE below);  
(c) ☐ They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or  
(d) ☐ They present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: see pages 2-5. (See 37 CFR 1.116 and 41.33(a)).

4. ☐ The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).  
5. ☐ Applicant's reply has overcome the following rejection(s): \_\_\_\_\_.  
6. ☐ Newly proposed or amended claim(s) \_\_\_\_\_ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).  
7. ☐ For purposes of appeal, the proposed amendment(s): a) ☐ will not be entered, or b) ☐ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.  
The status of the claim(s) is (or will be) as follows:  
Claim(s) allowed: \_\_\_\_\_.  
Claim(s) objected to: \_\_\_\_\_.  
Claim(s) rejected: \_\_\_\_\_.  
Claim(s) withdrawn from consideration: \_\_\_\_\_.

**AFFIDAVIT OR OTHER EVIDENCE**

8. ☐ The affidavit or other evidence filed after a final action, but before or on the date of filing a Notice of Appeal will not be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).  
9. ☐ The affidavit or other evidence filed after the date of filing a Notice of Appeal, but prior to the date of filing a brief, will not be entered because the affidavit or other evidence failed to overcome all rejections under appeal and/or appellant fails to provide a showing of good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).  
10. ☐ The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

**REQUEST FOR RECONSIDERATION/OTHER**

11. ☐ The request for reconsideration has been considered but does NOT place the application in condition for allowance because: \_\_\_\_\_.  
12. ☐ Note the attached Information Disclosure Statement(s). (PTO/SB/08) Paper No(s). \_\_\_\_\_.  
13. ☐ Other: \_\_\_\_\_.

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It is noted that applicants have filed an Amendment after the Final Rejection; applicants' attorney has addressed the issues of record or rebutted the claim rejections 1-2, and 4 under 35 U.S.C. 103(a) ; however, the proposed amendment filed on 9/18/06 will not enter because the introduction of the new limitation of the phrase " corresponding to the lowest concentration of oxygen forming an explosion range " into the proposed amendment would require further consideration and /or search.

**Claim Rejections - 35 USC § 103**

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**The rejection of Claims 1-2 and 4 under 35 U.S.C. 103(a) as being unpatentable over Frank (U.S. 3,904,652) in view of Kerr (U.S. 3,366,648).**

The rejection of Claims 1-2 and 4 under 35 U.S.C. 103(a) as being unpatentable over Frank (U.S. 3,904,652) in view of Kerr (U.S. 3,366,648) is maintained for reasons of the record on 12/29/05.

**Applicants' Argument**

1. The applicants argue the following issue:
  - a. Frank does not disclose any steps used during starting up of a reactor causing a raw material and the molecular oxygen-containing gas to pass a range in which the concentration of said raw material (excluding the concentration of said raw material at 0 vol. %) is less than the concentration of the lower explosion limit of said raw material and the concentration of oxygen is not less than the limiting oxygen concentration.
  - b. None of the Kerr and Frank do teach a step for reaching a steady state causing a range in which concentration of the raw material is less than the concentration of the lower explosion limit of the raw material and the concentration of oxygen is less than the limiting oxygen concentration.

The applicants' argument have been noted, but these arguments are not persuasive.

First, with regard to the first argument, the Examiner has noted applicants' argument. However, Frank expressly teaches the process for producing maleic anhydride from n-butane with a low oxygen concentration so as to avoid the flammable

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limit of the system (see col. 4 ,lines 57-60). Furthermore, the claim did not specify what the limiting oxygen concentration can be for the process; therefore, it is plausible to the skilled artisan in the art to assume that the Frank's concentration of oxygen is not less than the limiting oxygen concentration. In order to over come the prior art, the examiner recommends to file the declaration in which the unexpected result must be shown by the comparison test between them . Therefore, the prior art does read on the claimed invention.

Second, with regard to the second argument, the Examiner has noted applicants' argument. However, applicants have indicated that Kerr does teach the steady state of the claimed process; Kerr also has pointed out that , in order to avoid explosive hazards, 1.0 to 1.5 mole % of the monoolefin is recommended for optimum yield of the product (see col. 4 ,lines 60-66). Similarly , Frank expressly teaches the process for producing maleic anhydride from n-butane using a complex catalyst and a low oxygen concentration so as to avoid the flammable limits of the system. Both prior art have been involved with the safety issue of avoiding the flammable limits of the system during the production of maleic anhydride under similar reaction conditions (the reactants, etc.). In addition, the claim did not specify what the limiting oxygen concentration can be for the process; therefore, it is plausible to the skilled artisan in the art to assume that the Frank's concentration or Kerr's concentration of oxygen is not less than the limiting oxygen concentration. Therefore, the prior art does read on the claimed invention.


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Therefore, the issue still stands and the rejection of the claims; all the rejections are maintained.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Taylor Victor Oh whose telephone number is 571-272-0689. The examiner can normally be reached on 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas McKenzie can be reached on 571-272-0670. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
Taylor Victor Oh, MSD, LAC  
Primary Examiner  
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9/29/06